

CV – FULL PROF. NIKŠA JAJAC PhD

N. Jajac was born on August 9, 1977, in Split where he still lives today, he is married and the father of two children, a son and a daughter.

Education, employment and other achievements

After finishing high school in his hometown, he graduated in 2003 at the Faculty of Civil Engineering and Architecture (hereinafter: FGAG Split) at the University of Split (hereinafter: UNIST), earning the academic title of Master in Civil Engineering (dipl. ing.).

Shortly after he began working at Croatian Civil Engineering Institute (IGH) Business Centre Split at geotechnical department, primarily working on tasks related to the Zagreb-Split highway.

Since 2004, he has been employed at the Faculty of Civil Engineering and Architecture in Split as a research assistant. In 2004, he enrolled in the postgraduate scientific study program "Management" at the Faculty of Economics in Split, where he earned the academic title of Philosophy Master (Mr. sc.) in Social Sciences in the field of Economics, specializing in organization and management. In 2010, he earned the **academic title of Philosophy Doctor in Social Sciences in the scientific field of Economics, specializing in organization and management, at UNIST, Faculty of Economics.**

In capacity of the elected **representative of PhD students at University of Split** from the academic year 2005/06 to academic year 2010/11, he was a member of the University Senate. As member of the Senate, in 2007, he successfully advocated for the obligation of employers within UNIST to finance the costs of postgraduate studies to research assistants if attending doctoral studies is necessary for their employment with that employer. This was particularly important for doctoral candidates conducting interdisciplinary research. The legal obligation for employers to provide such funding was introduced several years later at state level for all employers within all public universities thanks to this and other similar initiatives.

In 2011, he was elected to the scientific position of Research Associate in the Interdisciplinary Scientific Area (hereinafter: ISA), specializing in scientific field of Project Management (hereinafter: PM), with elective scientific fields of both Civil Engineering and Economics, marking the first such appointment in Croatia. In the same year, he was also appointed to the academic position of **Assistant Professor** at the University of Split, Faculty of Civil Engineering, Architecture, and Geodesy (hereinafter: FGAG Split).

Through his example of being elected to an interdisciplinary academic position and his efforts within the academic community (especially at UNIST Senate and Faculty council of FGAG Split) he encouraged the election and employment of candidates to interdisciplinary scientific and academic positions and the establishment of study programs in the ISA within both UNIST and Croatia. Also, at state level, he collaborated with the first president of the ISA Committee (for science and art) in shaping the procedures and approaches of expert commissions while evaluating candidates' achievements for an academic ISA appointment. More specifically, he contributed to establishing a universal approach to evaluating candidates' scientific work in the process of appointment to ISA positions, regardless of the combination of fields and areas forming the interdisciplinary basis of such an appointment, a system which with minor modifications is still in use today.

In 2012, he was promoted to the scientific position of Senior Research Associate in the ISA, specializing in PM, with elective scientific fields in both Civil Engineering and Economics. In 2016, he was appointed to the academic position of **Associate Professor** in the ISA, specializing in PM at UNIST, FGAG Split.

In 2018, he was promoted to the scientific position of Scientific Advisor in the ISA, specializing in PM, with elective fields in both Civil Engineering and Economics. In 2021, he was appointed to the academic position of **Full Professor** in the ISA, specializing in PM at UNIST, FGAG Split. According to available information, Nikša Jajac is currently employed in the highest academic position in ISA and PM in Croatia, among all colleagues working in this field.

In 2024, he was elected to position of **Vice President for Science of the ISA Committee** - which is a unified committee for election to academic positions in the ISA for various combinations of scientific fields at national level.

In the period from 2013 to 2014, he served as the **Acting Head of the Technology Transfer Office at the University of Split**. He participated in the development and implementation of knowledge and technology transfer programs, and under his leadership, the University's Intellectual Property Regulations were drafted, along with the procedure for disclosing intellectual creations. He was involved in carrying out the first procedure for disclosing intellectual creations, regulating the transfer of intellectual property rights, and protecting and commercializing intellectual creations at the University. He also contributed to determination the Rules of Procedure for the "Intellectual Property and Technology Transfer Committee" at the UNIST and participated in the committee's work as a permanent member.

In the period from 2015 to 2016, he served as an **Advisor to the Rector of UNIST for Real Estate Management and Capital Investments**. He is the **conceptual founder of the University Art Gallery "Vasko Lipovac,"** which was opened in 2015.

In 2018, he was elected to position of **Dean of the Faculty of Civil Engineering, Architecture, and Geodesy (FGAG) in Split**. During his mandate, with the support of faculty staff and external partners, he led and successfully implemented a generational infrastructural and organizational great step forward - the INFRA FGAG project. This milestone required a high level of interdisciplinary knowledge and skills in project management, encompassing civil engineering and economics. It manifested in the reorganization of scientific research activities and faculty management.

The successful realization of this project demonstrated his expertise in managing complex construction projects and procuring scientific research infrastructure, as well as in designing and implementing organizational reforms. The project resulted in the identification and definition of business processes, which were then digitized through a newly designed and introduced information system. This system focused particularly on integrated management of scientific research projects and resources (both renovated and newly acquired - facilities, scientific and other equipment, and personnel), marking a significant step in digital transformation of FGAG Split.

During his mandate, there was significant progress in the number of international competitive projects obtained and carried out by FGAG Split, as well as in the employment of young researchers and associates on competitive projects, despite the challenges posed by the

COVID crisis. In other words, FGAG Split strongly turned towards EU funding sources, strengthening the project-oriented approach of the organization and related management. Furthermore, during this COVID crisis, his team established the legal framework and infrastructure for remote learning and work, which continues to be used today as a complement and support to traditional teaching methods, as well as in other FGAG activities, especially scientific research and international activities.

In 2022, at his own request, he stepped down from the position of Dean and, upon the Rector's proposal, was appointed to position of **Vice-Rector for Infrastructure at the University of Split**. During his mandate as Vice-Rector, he applied his interdisciplinary knowledge in project management and successfully led and executed renovation and reconstruction projects for several university-owned buildings. Notable among these are the Medical Faculty building, the Faculty of Hospitality and Gastronomy, as well as the Faculty of Kinesiology and the Academy of Arts. He also oversaw the development of several project-technical documents, which resulted in the issuance of valid construction permits for significant university infrastructure projects, including a new student dormitory (about 800 beds) and a Scientific Innovation Centre (a multipurpose research centre housing 11 different laboratories).

Additionally, he has been actively involved in shaping legal acts at state level related to scientific research. He has successfully raised awareness among colleagues, articulated demands, and coordinated activities of the interdisciplinary scientific community and representatives of interdisciplinary studies (particularly those in the field of project management) at the University of Split, as well as with those from universities in Zagreb, Rijeka, Osijek, Mostar, and various domestic and international institutions and associations, such as International Project Management Association (IPMA).

Research, teaching and mentoring

Since 2004, he has been involved in teaching, conducting teaching/exercises for nearly all subjects at the Department of Construction Management and Economics. Starting in 2011, at position of Assistant Professor he began designing and updating the content and learning outcomes, primarily teaching interdisciplinary courses that address both construction and economic topics across all study programs at FGAG Split. **Over the years, he has led exercises for 14 different courses and delivered lectures for 15 subjects.** Since 2016, he has been the course leader/instructor for 3 courses in the Undergraduate Civil Engineering Program, 4 courses in the Graduate Civil Engineering Program, 2 courses in the Graduate Architecture and Urbanism Program, 2 courses in the Undergraduate Geodesy and Geoinformatics Program, 2 courses in the Doctoral Program in Civil Engineering, and 3 courses in the Undergraduate Professional Civil Engineering Program. All of these subjects are interdisciplinary, and he designed and introduced 8 of them, along with new contemporary, project-based, and inclusive teaching methods.

Under his mentorship, four doctoral dissertations have been defended, and he has served on several doctoral defense committees at universities in Split, Zagreb, and Mostar. During his teaching on graduate programs, and especially while mentoring graduates and PhD students, he has guided students toward scientific research with interdisciplinary topics, resulting in published papers in WOS and Scopus databases, co-authored with students. Since 2016, he has also been involved in education through the International University Interdisciplinary Postgraduate Specialist Study - MBA in Construction at the University of

Zagreb, where he is a member of the professional council. He also teaches at the Faculty of Civil Engineering, Architecture, and Geodesy at the University of Mostar and at University North, and serves as a mentor in their doctoral studies.

From 2014 to 2016, he was the **Head of the Department of Construction Organization and Economics at FGAG Split**, and has served multiple terms as the **President of the FGAG Split Ethics Committee**. He is the **founder of the Department of Interdisciplinarity in Construction at FGAG Split** and serves as the lead instructor for most of its subjects.

He coordinates cooperation with educational bases through professional practice courses, for which he is the course leader, and through projects in which these bases have been involved, leading their working groups. He also contributed to the design, establishment, and implementation (as a lecturer for two courses) of lifelong learning program at FGAG Split entitled "Project Manager—Construction Project Management" approved by the Senate of the University of Split.

The scientific activity of Niksa Jajac are generally in project management, focusing on issues within the fields of both civil engineering and economics. More specifically, his research deals with the development of managerial functions, particularly planning and decision-making, aimed at solving problems in construction and the management of urban infrastructure systems. Additionally, he research in real estate value management and the planning of construction investments, with a particular focus on managing the implementation of large public projects in urban areas. Here, he addresses the strategic planning of major public investments and urban land consolidation. He also investigates project planning and develops models suitable for planning the restoration, specifically for selecting the appropriate restoration technologies for historical buildings. His research extends to maritime property management and concessions. Recently, his interests have focused on project management topics related to construction aspects of climate change adaptation and increasing resilience.

His scientific work can be grouped into five key areas:

- Generating new solutions to project management problems by introducing multi-criteria analysis (MCA) and methods;
- Contributing to project management through the use of new generic systems for managerial decision support based on decision support systems, multi-criteria methods, fuzzy logic, and artificial neural networks;
- Improving the effectiveness and efficiency of project management by combining Geographic Information Systems (GIS) and multi-criteria analysis (MCA);
- Enhancing project management for complex projects by improving prioritization processes, assessments, and valuations;
- Developing new approaches to the use of optimization methods and artificial intelligence in project management.

During his research work, which is fully defined and realized as interdisciplinary, Niksa Jajac has independently and in co-authorship published a total of 62 research/scientific papers (in both journals and books of conference proceedings), of which 41 are original scientific papers in internationally recognized journals with international editorial boards and foreign reviewers, indexed in relevant bibliographic databases. Among these, 36 are in journals indexed in Web of Science (WOS) and/or Scopus. He has participated in international scientific and professional conferences where he has presented multiple papers and published

several original complete scientific works in the proceedings of international scientific conferences that have international editorial boards and reviewers, also indexed in WOS and Scopus. Additionally, at those conferences he has served as an invited speaker.

He participates in the editorial work of the journal *Gradevinar*, which is represented in the WOS and Scopus databases, and has been a guest editor for a special issue of the WOS and Scopus journal *Sustainability*. Currently, he is a Topic Editor for the scientific journal *Sustainability* and a guest editor for a special issue of the WOS journal *Infrastructures*. He has reviewed a significant number of papers for various international scientific journals and for books of conference proceedings. He has been the chair of the organizing committee for an international scientific conference (which included experts from 10 countries across five continents, with the organizing or program committee having members from three countries) and has participated as a member of the organizing and scientific committees for several other international scientific conferences.

His international recognition is based on few hundreds of citations in the Web of Science (WOS) and Scopus databases, while his international experience stems from participation in international scientific conferences, involvement in the editorial boards of international WOS journals, visits to foreign institutions, and particularly from applying for, leading, and working in project teams for international competitive scientific-research and professional projects. Notable among these are projects from competitive programs such as FP7, UNECE, IRI, Interreg MED, and especially a current two projects from the Horizon Europe program, a significant portion of which relies on his previous research and works—specifically, inclusive and integral sustainable strategic planning in a multi-stakeholder environment.

Competitive international and domestic scientific-research projects:

- **2024 – ongoing: Blueprint for Atlantic-Arctic Agora on cross-sectoral cooperation for restoration of marine and coastal ecosystems and increased climate resilience through transformative innovation (A-AAgora) - Horizon Europe**
- **2024 - ongoing: Demonstration and Mainstreaming of Nature-Based Solutions for Climate Resilient Transformation in the Mediterranean (DesirMED) - Horizon Europe**
- 2020 - 2023: Increasing the Development of New Wood Industry Products Used in Construction – IRI 2 (Operational Program Competitiveness and Cohesion 2014-2020. Strengthening the Economy through Research and Innovation – ERDF)
- 2019 - 2023: Water of the Imotski Region – (Operational Program Competitiveness and Cohesion 2014-2020. Strengthening Resilience to Climate Change - ERDF and the Environmental Protection and Energy Efficiency Fund of the Republic of Croatia
- 2014 - 2017: Establish a Pan-European Information Space to Enhance Security of Citizens - FP7
- 2007 – 2013: Development of a Spatial Decision Support System for Waste Disposal - Ministry of Science, Education, and Sports (MZOS)
- 2006 - 2007: Strategic Management of Building Enterprises - ASO Wien
- 2004 - 2006: Decision-Making Systems Based on GIS and Multi-Criteria Analysis - MZOS
- 2019- 2022: Development of Energy Efficiency Planning and Services for the Mobility of Adriatic MARINAs Interreg Italy-Croatia CBC Programme 2014.-2020. (ERDF)
- 2018-2019: Plastic Busters: preserving biodiversity from plastics in Mediterranean Marine Protected Areas - Interreg Mediterranean Program 2014.-2020. (ERDF)

- 2016-2018: CAMPus sustainable University mobility plans in MED areas - Interreg Mediterranean Program 2014.-2020. (ERDF)
- 2011-2013: Pilot Project on Climate Change Adaptation Building the Link between Flood Risk Management Planning and Climate Change Assessment in the Sava River Basin – ISBRC (UNECE)

Institutional scientific-research projects:

- 2023 - ongoing (2027): Modeling Support for Project Management in Construction - Institutional Scientific-Research Project at FGAG Split
- 2019 - ongoing (2027): Designing Roads and Managing Road Infrastructure - Institutional Scientific-Research Project at FGAG Split
- 2019 - 2023: Modeling Support for Managerial Decision-Making in Construction - Institutional Scientific-Research Project at FGAG Split

He participates in the implementation of projects related to international cooperation (European University Alliances) and the development of higher education in the field of interdisciplinary sciences, project management, and construction management, as well as the economic aspects of construction studies (civil engineering, architecture, and geodesy). He is also involved in projects related to the development of scientific-research and other university infrastructure (building new and renovation of existing facilities and the preparation of project-technical and feasibility documentation for new facilities) and the connection of science and technology at higher education institutions with the economy (technology transfer).

Competitive international and domestic professional and teaching projects:

- 2023 – ongoing (2027): European University of the Seas project (SEA-EU 2.0) – Erasmus+;
- 2022 – 2024: Project of the renovation and equipping of part of the building at Teslina 10 and 12 in Split for KIF and UMAS – UNIST;
- 2022 – 2024: Preparation of project-technical and feasibility documentation for the "Student Dormitory in the Campus – reconstruction and extension" – UNIST;
- 2022 – 2023: Preparation of project-technical documentation for the "Science and Innovation Center of the University of Split – ZIC" – ERDF;
- 2022 – 2023: Project for the reconstruction/strengthening of the extension of the "A" building of the Medical Faculty in Split – UNIST;
- 2022 – 2023: Project for the reconstruction and repurposing of the Franciscan monastery into a public and social purpose building in Makarska for the needs of the HIG Study – UNIST;
- 2021 – 2023: Beyond Academia: Broadening the Career Horizons of Doctoral Students in Marine and Maritime Sciences in Europe – Erasmus+;
- 2019 – 2023: First Step in Career – Jobs of the Future in Construction – ESF;
- 2018 – 2021: Implementing Modern Scientific-Research Infrastructure at FGAG for Smart Specialization in Green and Energy-Efficient Construction – ERDF;
- 2015 – 2016: Development and Application of the Croatian Qualifications Framework in the Field of Higher Education for Civil Engineers – ESF;
- 2015 – 2016: Development of Higher Education Standards for Professions and Qualifications for Sustainable and Green Construction, along with the development of a

new university master's program in sustainable and green construction with an emphasis on the Mediterranean region – ESF;

- 2013 – 2015: Technology Transfer Infrastructure in the Croatian Adriatic Region – IPA IIIc Science and Innovation Investment Fund – SIIF.

He was awarded with of two Science Awards from the University of Split, in 2019 and 2021, as well as the Award for Contribution to the Development of the FGAG Split in the area of developing all study programs and the scientific-research work awarded by the Faculty Council of FGAG Split in 2021. Additionally, he received the international Jean-Pierre Brans Award for 2020, awarded by the Jean-Pierre Brans Fund for the best scientific papers in the field of multi-criteria decision modelling, which confirmed his interdisciplinary scientific contribution as well as his contribution to scientific-research activities.

He has participated in activities to popularize science, encouraging dialogue between the scientific community and the interested public regarding science and scientific education (forums, science festivals, special events, media appearances, etc.). Specifically, he has made numerous organized media appearances (in printed and electronic media at the local and national level, as well as on social media) to popularize science, particularly interdisciplinary research through the promotion of scientific work and education, and scientific projects aimed at strengthening the scientific research activity and appropriate infrastructure of FGAG Split and the University.

He has organized special events to promote scientific activities and the possibilities of scientific research work at the FGAG Laboratory, celebrated the 50th anniversary of FGAG Split, and collaborated with the FGAG Student Council to host a major outdoor concert featuring popular performers to promote science and higher education among citizens, especially among young people—future students and researchers.

He has participated in the Researchers' Night and Science Festival for a several times, delivering popular scientific lectures for the interested public of various ages and serving as part of the organizational team at the University of Split.

2018 - present: Member of HUOG (Croatian Association for Construction Management).

2009 - present: Member of HDOI (Croatian Society for Operations Research).

2009 - 2011: Former member of TIEMS (The International Emergency Management Society).

2004 - present: Member of UGIS (Association of Civil Engineers of Split).

He is engaged in humanitarian work as a leader or member of the project team of several humanitarian actions aimed at support and increasing the visibility of marginalized groups such as neglected children, people with disabilities, etc.. Since 2005, he is a member of the Rotary Club Split Plus, where he performed all club functions, including the presidential one.